|  |  |  |
| --- | --- | --- |
| heatrans | **Physics**  **Convection** |  |
| **Worksheet-4-** |

|  |  |
| --- | --- |
| Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | Class: 8 / ……… |
| Date: 13/ 5 / 2012 |

1. Experiment

Fill the round-bottom flask with water and place carefully some potassium permanganate at the bottom of the flask. Place a Bunsen burner and observe the crystal.

We observe water rising at the center of the flask and then sinking down the sides of the flask.

1. Explain the circulation of water.

When the water at the bottom of the flask is heated, it expands so it is less dense, water starts to rise. The cooler water in the up is denser sink. This movement of water is called convection current.

1. Define convection currents

It is the movement of liquids or gases caused by change in density.

1. Define convection

It is the transfer of heat energy by currents convection in gases or liquids.

1. Can convection occur in solids?

Convection currents occur only in gases and liquids but not in solids.

6- Common applications of convection

a-Electric kettles



b-Air conditioners - refrigerators

c-Sea breeze and land breeze

* What is sea breeze?

A sea-breeze  is a wind from the sea that develops over land near coasts.

* What is land breeze?

A land-breeze  is a wind from the land that develops over the sea.

* Explain sea breeze.

During the day the land heats up more than the sea, so warm air rises cool air comes from the sea

* Explain land breeze.

During the night the sea is warmer than the land so warm rises and cool air comes from the land.

